PB89-128367

Superfund Record of Decision (EPA Region 6)
Sol Lynn, Texas, March 1988
First Remedial Action

(U.S.) Environmental Protection Agency
Washington, DC

25 Mar 88

U.S. Department of Commerce
National Technical Information Service
NTIS

PB89-128367

United States
Environmental Protection
Agency

Office of
Emergency and
Remedial Response

EPA/ROD/R06-88/029
March 1988

EPA

Superfund Record of Decision:

Sol Lynn, TX

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U.S. DEPARTMENT OF COMMERCE
NATIONAL TECHNICAL INFORMATION SERVICE
SPRINGFIELD, VA. 22161

50272-10

REPORT DOCUMENTATION PAGE	1. REPORT NO. EPA/ROD/R06-88/029	2.	3. Recipient's Accession No. PB89 128367/AS
4. Title and Subtitle SUPERFUND RECORD OF DECISION Sol Lynn, TX First Remedial Action			5. Report Date 03/25/88 6.
7. Author(s)			8. Performing Organization Rept. No
9. Performing Organization Name and Address			10. Project/Task/Work Unit No. 11. Contract(C) or Grant(G) No. (C) (G)
12. Sponsoring Organization Name and Address U.S. Environmental Protection Agency 401 M Street, S.W. Washington, D.C. 20460			13. Type of Report & Period Covered 800/000 14.

15. Supplementary Notes

16. Abstract (Limit: 200 words)

The Sol Lynn site, also known as Industrial Transformers site, is located in Houston, Texas. The area around the three-quarter acre site is a mix of residential, commercial, and light industrial facilities. The residential population is about 2,000 and a maximum daily traffic of 100,000 people may move within a one-mile radius due to recreational activities associated with the area. The site operated as an electrical transformer salvage and recycling company between 1971 and 1978, and as a chemical recycling and supply company from 1979 through 1980. The first documented investigation of this site took place during the fall of 1971 when the City of Houston Water Pollution Control Division noted that workers at Industrial Transformers poured oil out of electrical transformers onto the ground during transformer dismantling. In 1981, strong odors originating from the site were brought to the attention of the Texas Department of Water Resources, the predecessor agency of the Texas Water Commission (TWC). Upon inspection, approximately 75 drums were found scattered about the property. Most of the drums, labeled "trichloroethylene", were empty and had puncture holes. A technical assessment of the site, commencing in January 1986, indicated the presence of PCB contamination. PCB contamination has been confined to the top two feet of soil. The highest concentrations of PCBs were found in the middle of the site. TCE has migrated

(See Attached Sheet)

17. Document Analysis a. Descriptors

Record of Decision
Sol Lynn, TX
First Remedial Action
Contaminated Media: soil
Key Contaminants: PCBs

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report) None	21. No. of Pages 67
	20. Security Class (This Page) None	22. Price PC $15.95/MF $6.95

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Sol Lynn, TX
First Remedial Action

16. ABSTRACT (continued)

deeper than PCB and away from the site. Residual TCE remaining in the surface soil will be remediated along with the PCB contaminated soils. Any TCE that has migrated into the deeper ground water will be addressed in the second operable unit. The primary contaminant of concern affecting the soil is PCB.

The selected remedial action for this site includes: excavation of approximately 2,400 yd^3 of PCB-contaminated soil and treatment using alkali metal polyethylene glycolate (APEG) complex dechlorination with onsite disposal of treatment residuals; effectiveness verification of the dechlorination process through treatability studies; and if necessary, pretreatment of liquid byproducts with discharge into a publicly owned treatment works facility. The estimated present worth cost for this remedial action is $2,200,000.

Declaration for the Record of Decision

Site Name and Location

Sol Lynn Site is located in Houston, Harris County, Texas

Statement of Purpose

This decision document represents the selected remedial action for the Sol Lynn site, developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the National Contingency Plan (40 CFR Part 300).

Statement of Basis

This decision is based on the administrative record for the Sol Lynn site. The attached index (Attachment A) identifies the items which comprise the administrative record upon which the selection of the remedial action is based.

Description of the Selected Remedy

This Record of Decision for the Sol Lynn site requires the following actions to address the polychlorinated biphenyls contaminated soil:

- o excavate the soil;
- o treat the soil with alkali metal polyethylene glycolate (APEG);
- o backfill treated soil.

Declaration

The selected remedy is protective of human health and the environment, attains Federal and State requirements that are applicable, or relevant and appropriate, and is cost-effective. This remedy satisfies the statutory preference for remedies that employ treatment technologies which permanently and significantly reduce the toxicity, mobility or volume of hazardous substances.

The State of Texas has been consulted and agrees with the approved remedy.

March 25, 1988
DATE

Robert E. Layton Jr.
Robert E. Layton Jr., P.E.
Regional Administrator

Sol Lynn
Record of Decision Concurrences

The Sol Lynn Record of Decision has been reviewed and I concur:

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Hazardous Waste Management Division

Carl E. Edlund, Chief
Superfund Program Branch
Hazardous Waste Management Division

Bennett Stokes, Chief
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Hazardous Waste Management Division

Summary of Remedial Alternatives Selection for the Contaminated Soils
at the Sol Lynn/Industrial Transformer Site, Operable Unit I
Houston, Texas

I. SITE LOCATION AND DESCRIPTION

The Sol Lynn Superfund site (also known as Industrial Transformers (IT)) is located in Houston, Texas. As shown in Figure 1, the site is located just south of I-610 and west of Highway 288. The Sol Lynn site encompasses approximately three quarters of an acre.

Surface drainage around the site includes shallow ditches that border the site along Knight and Mansard Streets. These two ditches carry surface runoff by slightly different routes to Braes Bayou which empties into Buffalo Bayou then into the San Jacinto River Basin, which ultimately flows into Galveston Bay. The site is outside the 100-year flood plain.

The area around the site is a mix of residential, commercial and light industrial facilities. The light industrial, commercial business area is located directly to the east and south of the site, Astroworld and Astrodome are approximately 4,000 feet to the north of the site, and finally a mix of private, single and multi-family dwellings are approximately 3,000 feet to the west. The residential population is about 2,000 and a maximum daily traffic of 100,000 persons may move within a one-mile radius due to recreational activities associated with the Astrodome and Astroworld.

Site History

The Sol Lynn site is the location of a former electrical transformer salvage and recycler company which operated between 1971 and 1978. A chemical recycling and supply company subsequently operated at the same location from 1979 through 1980.

The first documented investigation of this site took place during the fall of 1971 when the City of Houston Water Pollution Control Division noted that workers at the Industrial Transformer Company poured oil out of electrical transformers onto the ground as they were being dismantled. In 1981, strong odors originating from the site were brought to the attention of the Texas Department of Water Resources, the predecessor agency of the Texas Water Commission (TWC). Upon inspection it was revealed that approximately 75 drums were scattered about the property. Most of the drums, labeled "trichloroethylene", were empty and had puncture holes.

In October 1984 the site was proposed for inclusion on the National Priorities List. In September 1985, the TWC entered into a Cooperative Agreement with the EPA to conduct the Remedial Investigation/ Feasibility

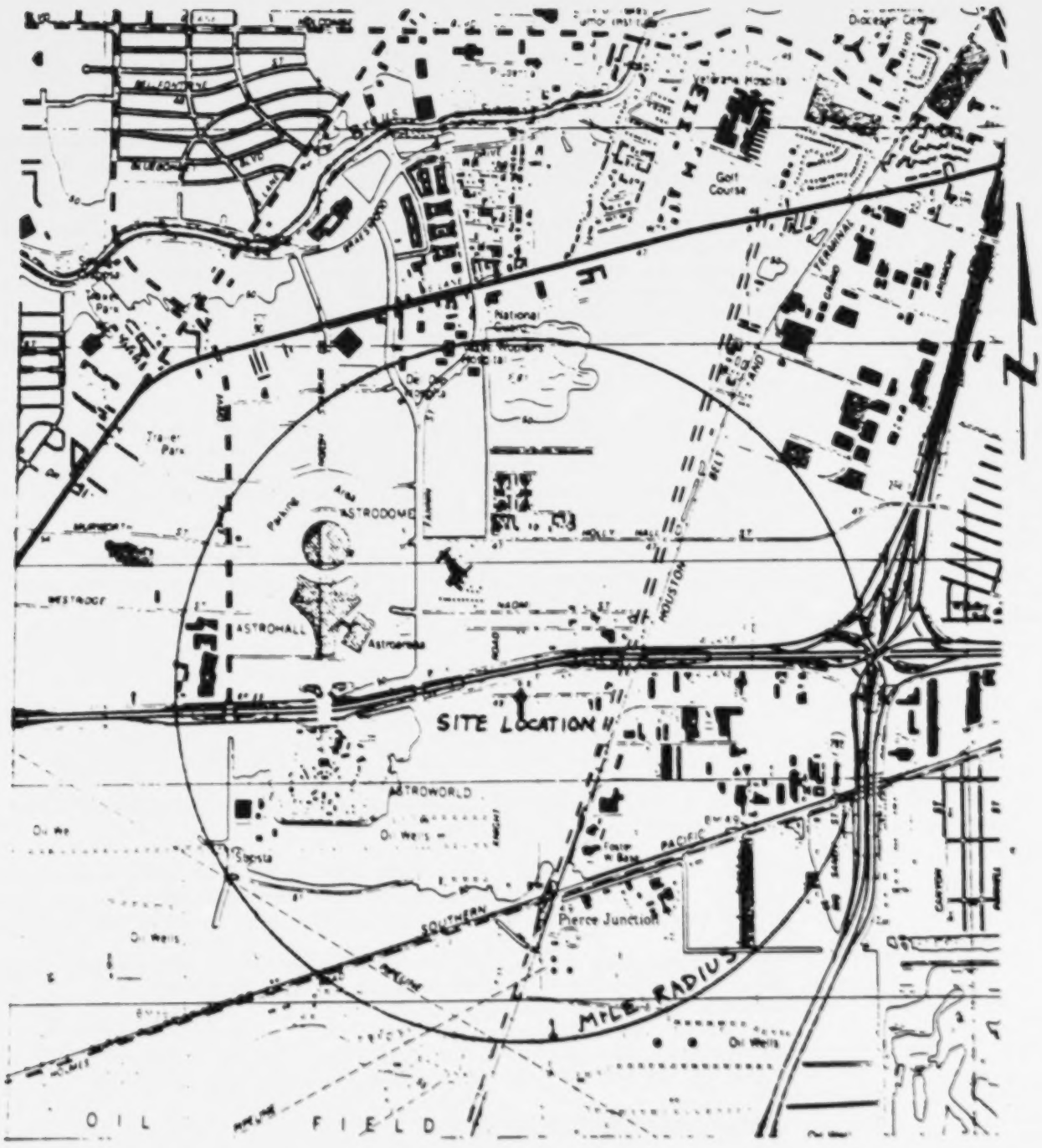

FIGURE 1
INDUSTRIAL TRANSFORMER
HOUSTON, TEXAS

Study (RI/FS) at the site. Utilizing funds from this cooperative agreement, the TWC contracted with Radian Corporation on June 30, 1986, for a technical assessment of the site. Field work began January 14, 1987.

In an effort to address the obvious contamination in an expeditious manner, the site was broken down into parts called operable units. There is a soil operable unit and a groundwater operable unit. This summary only examines potential remedial alternatives for the soil operable unit. The groundwater operable unit will be addressed in the second, or "Phase II" Feasibility Study.

Geology

Surface soils at the site and in the vicinity are of the Lake Charles series. These soils are characterized by somewhat poor drainage and high available water capacity. When the soil is dry, deep, wide cracks form on the surface where water can enter rapidly. When the soil is wet the cracks are sealed and water infiltrates slowly.

Below the surface soil is Beaumont Clay, which is of Pleistocene age. The lithology of the Beaumont Clay is comprised of unconsolidated clays and muds or deposits of clayey sands and silts. The clays and muds were deposited as interdistributary, abandoned channel fill, overbank fluvial or mud-filled coastal lake or tidal creek muds. The sands and silts represent alluvium, levee and crevasse splays.

The uppermost aquifer is encountered at a depth of 30-34 feet below ground surface. This particular aquifer is a water-bearing sand that varies in thickness from 2 feet to 6 feet, averaging 4 1/2 feet. Sand content increases from west to east across the site, from 50% to 70%. This aquifer is not used as a drinking water supply. The groundwater flows to the northwest.

The uppermost water-bearing sand is separated from the next lower, "intermediate" water-bearing sand by a stiff clay, approximately 45 to 52 feet in thickness. The intermediate water-bearing sand is underlain by clay.

The major aquifers in the Houston area are the Chicot and Evangeline. These aquifers supplement surface water in supplying the City with drinking water. In the vicinity of the site the shallowest well for the City of Houston is at 670 feet below the surface. During the groundwater investigation of the site an evaluation of the extent of the contamination and its impacts on these wells will be determined.

Remedial Investigation Results

During the RI samples were collected from soil, stormwater, and air to determine the nature and extent of contamination.

Because information collected previously by TWC indicates the primary contaminants at the site are polychlorinated biphenyls (PCBs) and trichloroethylene the emphasis for the analytical testing was placed on determining vertical and areal extent of these two contaminants.

In the samples collected from the upper two feet of soil, concentrations of PCBs varied from 350 ppm at the middle of the site, to 118 ppm at the eastern edge of the site, to not detected in the western part of the site. samples collected at the 2 to 4 foot depth indicated PCBs of less than 5 ppm.

Seven stormwater samples were collected from "ponded" areas onsite and from the offsite drainage ditch areas. All samples were analyzed for PCBs. Only one sample of "ponded" water at the site near a contaminated area showed PCBs (0.0011 ppm). Two of the samples were analyzed for TCE. Only one sample of "ponded" water shows the presence of TCE at .0026 ppm.

Sediment samples were collected from the same location as the stormwater samples. The results of the sediment sampling showed that only one sample collected in a drainage ditch south of the site exceeded the cleanup criterion. Air samples were also taken. The analysis of the air samples did not detect TCE or PCBs.

In conclusion, analytical results of all samples collected at the site indicate that the PCB contamination is confined to the top two feet of soil and is within the area shown on Figure 2. This constitutes a volume of approximately 2400 cubic yards of contaminated PCB soils that exceed the cleanup criterion. The TCE which is a highly mobile and volatile compound, has migrated much deeper and farther away from the site. Very little TCE remains near the surface because it has either volatilized or moved with the groundwater into the deeper aquifers. The TCE that does remain at the surface will be remediated along with the PCB contaminated soils. Any TCE that has migrated into the deeper groundwater is beyond the scope of this cleanup will be addressed as part of the groundwater operable unit.

Potential Impacts of the Site on Human Health and the Environment

As part of the remedial investigation, an assessment of the health threat created by the current site conditions was conducted. Factors included in this risk assessment were the identified target receptors, the maximum concentrations of PCBs onsite, and the degree of exposure to the hazards from the site. Target receptors identified in the assessment included the workers, trespassers, and clientele of the business which currently operate at the site.

The results of the risk assessment indicate that the highest concentrations of PCBs found onsite present a 10^{-3} (one thousand in one million) lifetime

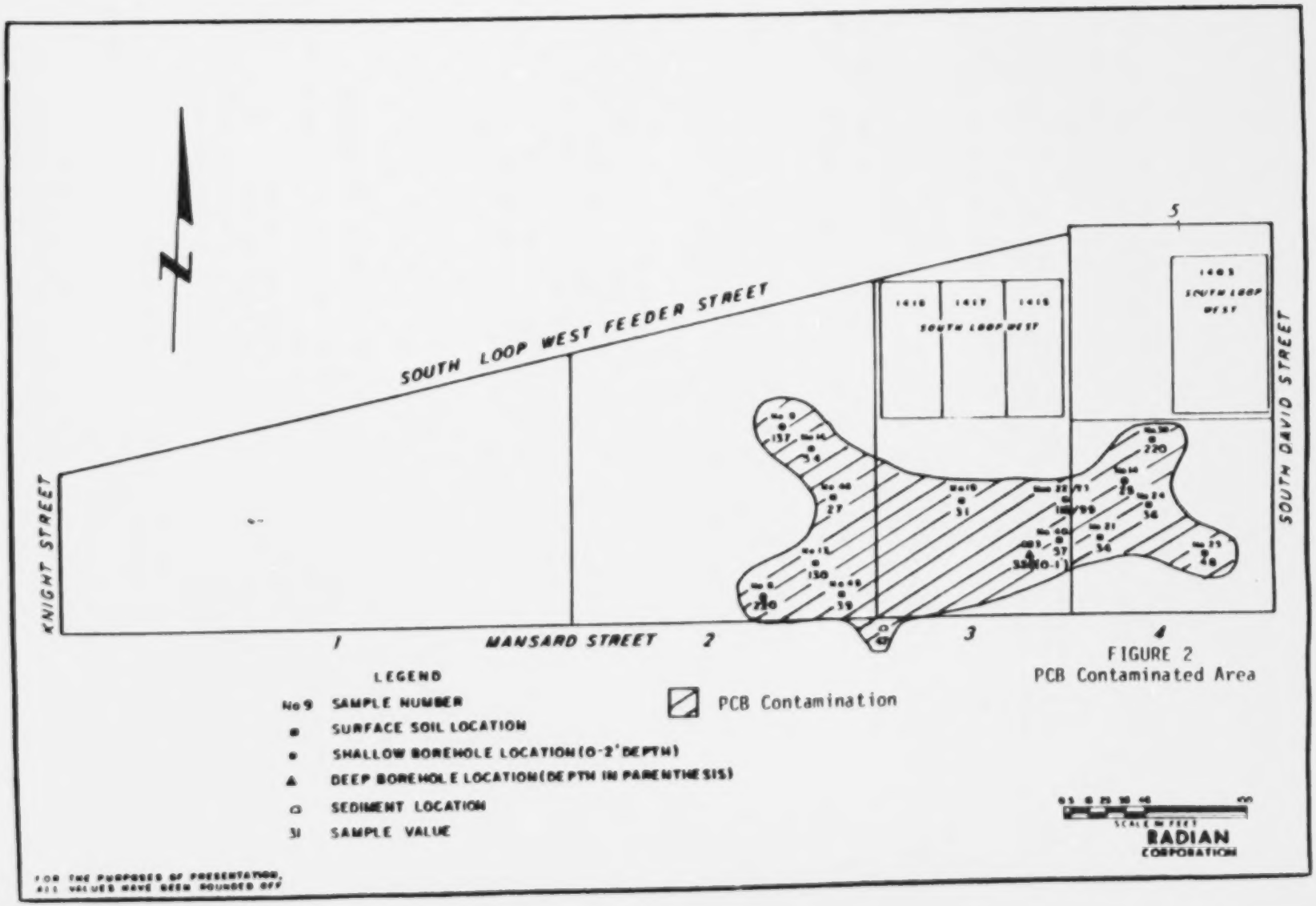

FIGURE 2
PCB Contaminated Area

cancer risk. The major pathways of exposure are dermal and ingestion. This level represents the threat that would be posed by the site conditions if no remedy was implemented.

The extent of remedial action necessary is based on a comparison of the contaminant concentrations found at the site to either 1) existing health-based standards or criteria; or 2) concentrations that would represent a 10^{-4} to 10^{-7} lifetime cancer risk. A health-based criterion for PCB contaminated soil is available (Toxic Substances Control Act Spill Cleanup Policy, Fed. Register, April 2, 1987). This criterion, 25 ppm, which assumes a worker is exposed to the site of eight hours per day for a 40 year period was chosen as the cleanup standard.

II. Enforcement

The goal of the EPA is to have those parties responsible for contamination of the site perform the cleanup. There are three identified potentially responsible parties (PRPs) for the IT site. These parties will be given the opportunity to conduct or participate in the remedial action selected for the site. If they refuse, EPA will proceed with funding the remedial design and implementation.

III. Community Relations History

The Industrial Transformer Superfund site was proposed for the National Priorities List (NPL) in October 1984. In February 1985 the U.S. Environmental Protection Agency (EPA) and the Texas Water Commission (TWC) held a public meeting in Houston for residents near the site to discuss site conditions and the Superfund Program/Process. Approximately 15 people attended the meeting. On October 3, 1985, EPA issued a news release announcing that funds to study the site had been awarded to the TWC.

Initiation of studies on Industrial Transformer was announced by TWC at a public meeting in Houston on September 24, 1986. Evaluation of the site was divided into two separate studies: 1) surface soil contamination; 2) groundwater contamination. The study addressing surface soil contamination was completed in December 1987. On January 21, 1988, EPA announced to the public via a news release that a public meeting would be held on February 2, 1988, to discuss the proposed remedy for surface contamination at the site. The groundwater study is expected to be completed in 1989.

An EPA prepared fact sheet which described alternative remedial actions for the soil contamination along with the EPA preferred alternative was sent to the interested and affected public shortly after the public meeting was announced. EPA and TWC conducted the 7:00 pm public meeting at the Astro Village Hotel on February 2, 1988. Approximately 35 people attended the public meeting.

Further details on community relations are contained in Attachment B.

IV. Alternatives Evaluation

The requirements, procedures and preferences that the EPA follows in selection of a Superfund remedy are outlined in the Comprehensive Environmental Response Compensation and Liability Act, (CERCLA) as amended by the Superfund Amendments and Reauthorizaton Act (SARA), the National Contingency Plan (40 CFR Part 300) and various apolicable guidelines. The following describes the evaluation criteria used in selection of a remedy for the IT site.

A. Evaluation Criteria

1. SARA Requirements-Section 121(a) through (f) of SARA contains three factors which EPA must consider in selecting a remedy.

a. Protection of Human Health and the Environment.

The alternative must provide adequate protection of human health and the environment.

b. Cost Effective

Cost effectiveness includes an evaluation of the following criterion:

i. Long-term Effectiveness and Permanence

Alternatives are assessed for the long-term effectiveness and permanence they afford along with the degree of certainty that the remedy will prove successful. Factors considered are:

- magnitude of residual risks in terms of amounts and concentrations of waste remaining following implementation of a remedial action, considering the persistence, toxicity, mobility, and propensity to bioaccumulate of such hazardous substances and their constituents;
- type and degree of long-term management required, including monitoring and operation and maintenance;
- long-term reliability of the engineering and institutional controls, including uncertainties associated with land disposal of untreated wastes and residuals;

ii. Short-term Effectiveness

The short-term effectiveness of alternatives must be assessed; considering appropriate factors among the following:

- magnitude of reduction of existing risks;
- short-term risks that might be posed to the community, workers, or the environment during implementation of an alternative including potential threats to human health and the environment associated with evacuation, transportation, and redisposal or containment;;
- time until full protection is achieved.
- potential need for replacement remedy.
- potential for exposure of human and the environmental receptors to remaining waste considering the potential threat to human health and the environment associated with excavation, transportation, redisposal or containment.

iii. Implementability

The ease or difficulty of implementing the alternatives are assessed by considering the following types of factors:

- degree of difficulty associated with constructing the technology;
- expected operational reliability of the technology;
- need to coordinate with and obtain necessary approvals and permits (e.g. NPDES, Dredge and Fill Permits for off-site actions) from other offices and agencies;
- availability of necessary equipment and specialists;
- available capacity and location of needed treatment, storage, and disposal services.
- compatibility with existing future land use.
- need to respond to other sites

iv. Cost

The types of costs that should be assessed include the following:

- capitol cost;
- operational and maintenance costs;

- cost of five-year reviews, where required
- net present value of capital and O&M costs;
- potential future remedial action costs.

c. Compliance with applicable or relevant and appropriate Federal and State regulations

In determining appropriate remedial actions at Superfund sites, consideration must be given to the requirements of other Federal and State laws. Alternatives should be assessed as to whether they attain legally applicable or relevant and appropriate requirement of other Federal and State public health and environmental laws. Requirement under Federal and State laws that specifically address the circumstances at a Superfund site are considered applicable. Relevant and appropriate requirements, while not applicable to a Superfund site, address situations which are sufficiently similar to those existing at the site.

2. SARA Preferences. The EPA is also directed by SARA to give preference to remedial actions which reduce the toxicity, mobility or volume of the waste. Relevant factors are:

- the treatment processes the remedies employ and materials they will treat;
- the amount of hazardous materials that will be destroyed or treated;
- the degree of expected reduction in toxicity, mobility, or volume;
- the degree to which the treatment is irreversible;
- the residuals that will remain following treatment, considering the persistence, toxicity, mobility, and propensity for bioaccumulation of such hazardous substances and their constituents.

3. EPA Guidelines-It is EPA policy is to consider other factors in factors in selection of a remedy. These are:

a. Community Acceptance

This assessment should look at:

- components of the alternatives which the community supports;

- features of the alternatives about which the community has reservations;
- elements of the alternatives which the community strongly opposes.

b. State Acceptance

Evaluation factors include assessments of:

- components of the alternatives the State supports;
- features of the alternatives about which the State has reservations;
- elements of the alternatives under consideration that the State strongly opposes.

B. Description of Alternatives

In conformance with the NCP, an initial set of remedial approaches were screened to determine whether they might be appropriate for this site. From these possible remedies, eight alternatives were chosen for more detailed evaluation and comparison with the remedy selection criteria outlined above. Each is summarized below:

Alternative 1, No Action - For this remedy, no new or additional remedial actions will be conducted. There are some costs associated with closing out the site, which include plugging monitoring wells, dismantling remedial investigation equipment and the decontamination pad.

In addition, long term monitoring activities would be required. Groundwater, soil sediment, and air samples will be taken at an approximate cost of $10,000 per year. The present worth of this alternative costs is estimated to be $450,200 for 30 years.

Alternative 2, Off Site Landfill - In the off site landfill alternative, PCBs above 25 ppm in the soil would be excavated, transported, and disposed at an off site PCB landfill. Approximately 2500 cubic yards of soil will require excavation and transport several hundred miles to an appropriate facility, necessitating over 168 dump trailer loads. The off site landfill will be specifically permitted for the disposal of PCBs and in compliance with the Resource Conservation and Recovery Act and TSCA. The estimated cost of this alternative is 2.3 million.

Alternative 3, Stabilization and Off Site Landfill - This alternative is the same as Alternative 2, except prior to disposal the excavated soils will be stabilized with a cement-type mixture to enhance binding of the toxic substances to the soil. The estimated cost of this alternative is $3.5 million.

Alternative 4, In-Situ Glassification - This is an innovative technology which uses an electric current passed between electrodes in the ground to convert the soils into a stable glass material resembling natural obsidian.

Implementation of this process would require power in the form of locally supplied electricity. A square array of four electrodes is placed in the soil to the desired treatment depth, at lest two feet in this case. A mixture of graphite and glass frit is spread between the electrodes to act as a starter path for the electric current established by the potential applied to the electrodes. The current heats the starter path and adjacent soils to 3600°F, well above normal melting temperatures of most soils. The molten soils incorporate the inorganic constituents and pyrolysis the organic ones. The pyrolysis byproducts migrate to the surface and combust in the presence of oxygen. A hood placed over the treatment area collects the gases for treatment. Following glassification more topsoil will be added and revegetated. This alternative may require a pilot scale test to determine the most effective electrode spacing and depth of soil treatment. The estimated cost for this alternative is $1.5 million.

Alternative 5, On Site Incineration - This alternative consists of excavating contaminated soils and incinerating them onsite using the most suitable of several types of mobile or transportable thermal destruction units.

After excavation the soils will be stored temporarily in waste piles then fed into an on site incinerator. The incinerator exhaust gases will be scrubbed prior to venting to the atmosphere. If the ash is hazardous it will be disposed of in a RCRA approved off site landfill (as described in Alt. 2). If not it would be disposed on site. Following excavation the topsoil will be replaced and revegetated. The estimated cost for this alternative is $2.5 million.

Alternative 6, Off Site Incineration

This remedy would require the excavation and transportation or two feet of soil in bulk to an off site commercial incineration facility that complies with RCRA.

Transport and regrading will be as described for Alternative 2. The soils will be transported in bulk to an off site commercial incin-

cineration facility in compliance with Section 121 (d) of CERCLA as amended by SARA. The cost of this alternative is estimated at $6.1 million.

Alternative 7, Chemical Treatment - This is a new technology which results in the dechlorinization of PCBs by mixing soils with alkali metal polyethylene glycolate complex (APEG) in a batch reactor. This treatment changes the chemical composition of the PBCs by chemically reacting with the chlorine atoms occur until they are completely dechlorinized. This process yields polyglycol byproducts that are non-toxic. This technique would be proven effective by implementing treatability testing. This alternative is estimated to cost $2.2 million.

Alternative 8, Biological Treatment - This is a new technology in in the hazardous waste field. Wastes are used as a food source for the microorganisms in a slurry medium with mechanical or diffused air supplying oxygen to the microbes. For this alternative the soil will be excavated and treated in a batch system on site. The estimated cost is $3.3 million.

Evaluation of Alternatives

An evaluation of the alternatives is shown on Table 1. The following values were assigned to compare remedial selection criteria:

\+ Alternative would exceed a criterion in comparison to other alternatives.
O Alternative can be designed to meet the selection criterion.
\- In comparison to other remedies, this alternative will present difficulty in achieving a selection criterion.

1. Complies with ARARs (meets or exceeds Applicable, or Relevant and Appropriate Federal and State Requirements).

   Table 2 delineates the Federal and State statutes which are applicable or relevant and appropriate (ARARs). In all instances where the regulation is considered applicable or relevant and appropriate, those requirements will be met.

2. Reduces Toxicity, Mobility, and Volume

   a. No Action was rated "-" for reducing mobility and toxicity because it does nothing to reduce these parameters. The volume will not change so it was rated a "O".

   b. Off Site Landfill was rated a "O" for mobility because the landfill encapsulate the waste from the environment as long as all the containment features remain intact. Because of the risk of future leakage from a landfill, total immobilization can not be assured. The toxicity will not change so it was rated "-" and the volume will stay the same.

T. 2 1

COMPARISON OF REMEDIAL ALTERNATIVES

INDUSTRIAL TRANSFORMER
SUPERFUND SITE

ALTERNATIVES	REDUCES MOB.	REDUCES TOX.	REDUCES VOL.	EFFECTIVENESS SHORT-TERM	EFFECTIVENESS LONG-TERM	IMPLEMENT-ABILITY	COST $ MILLION
1. NO ACTION	-	-	0	0	-	+	.45
2. OFF-SITE LANDFILL	0	-	0	-	-	+	2.3
3. STABILIZATION AND OFF-SITE LANDFILL	+	-	-	-	0	+	3.5
4. INSITU GLASSIFICATION	+	+	+	0	+	-	1.5
5. ON-SITE INCINERATION	+	+	+	-	+	+	2.5
6. OFF-SITE INCINERATION	+	+	+	-	+	+	6.1
7. CHEMICAL DECHLORINIZATION	+	+	+	0	+	0	2.2
8. BIOLOGICAL TREATMENT	+	+	+	0	+	0	3.3

LEGEND

+ = Alternative would exceed criterion in comparison to other alternatives

0 = Alternative can be designed to meet criterion

- = Difficult for alternative to meet criterion

ABBREVIATIONS

MOB = Mobility

TOX = Toxicity

VOL = Volume

Table 2

Summary of Applicable or Relevant
and Appropriate Environmental Statutes

Statute	Regulation	Remedial Alternatives			
		1) No Action	2) Off-Site Landfill	3) Stabilization With Off-Site Landfill	4) Insitu Glassification
Toxic Substance and Control Act (TSCA)	Usage and disposal of PCBs (40 CFR 761)	NA	A	A	R
Resource Conservation and Recovery Act (RCRA)	A) Operation of hazardous waste storage/treatment facilities (40 CFR 264)	NA	A	A	R
	B) Hazardous waste land disposal ban (40 CFR 268)	NA	A	A	R
	C) Incineration Regulations (40 CFR 265)	NA	NA	NA	NA
Occupational Safety and Health Act	Protection standards for workers (29 CFR 1910)	A	A	A	A
Department of Transportation	Regulates the transport of hazardous waste (49 CFR 179)	NA	A	A	NA
Texas Solid Waste Disposal Act	Operation of hazardous waste storage	NA	A	A	R

KEY

A Applicable-requirement will be met
R Relevant and appropriate requirement will be met
NA not an ARAR

TABLE 2 (Cont'd)

Summary of Applicable or Relevant
and Appropriate Environmental Statutes

Statute	Regulation	Remedial Alternatives		
		Onsite 5) Incineration	Offsite 6) Incineration	Chemical 7) Dechloriniza
Toxic Substance and Control Act (TSCA)	Usage/Disposal	R	R	R
Resource Conservation and Recovery Act	A) Operation of hazardous waste storage/treatment facilities (40 CFR 264)	R	A	R
	B) Hazardous waste land disposal ban (40 CFR 268)	R	R	R
	C) Incineration Regulations (40 CFR 265)	A	A	NA
Occupational Safety and Health Act	Protection standards for workers (29 CFR 1910)	A	A	A
Department of Transportation	Regulates the transport of hazardous waste (49 CFR 179)	NA	A	NA
Texas Solid waste Disposal Act	Operation of hazardous waste storage	R	A	R

KEY

A Applicable-requirement will be met
Relevant and appropriate requirement will be met
not an ARAR

c. Stabilization with Off Site Landfill was rated a "+" for mobility. Stabilization before landfilling will immobilize the waste before containment. The toxicity will not change so it was rated "-" and the volume will greatly increase due to the fixatives added to stabilize the waste so it was rated a "-".

d. In-Situ Glassification was rated with a "+" for mobility because this method convert the soils into a stable material resembling natural obsidian. It was rated a "+" in toxicity reduction because it would be expected to destroy PCBs in the soil with a greater than 99.9999% destruction efficiency. Glassification will reduce the volume of toxic substances substantially, therefore it is rated a "+".

e. On Site and Off Site Incineration were given a "+" for reducing toxicity, and mobility because thermal destruction destroy organics in the soil. Soil will not burn, therefore the volume of soil will not be substantially reduced, however, since the volume of contaminants will be reduced these are rated a "+" on volume reduction.

f. Chemical Dechlorinization was given a "+" for reducing mobility and toxicity because studies show that PCBs will be eliminated. After treatment the volume of remaining material is relatively unchanged because the material treated is soil. However, since the volume of contaminants will be reduced this rated a "+" on volume reduction.

g. Biological Treatment was given a "+" for reduction in mobility and toxicity because studies show that PCBs can be biodegraded. The volume of toxic substances will be reduced therefore this alternative was rated a "+" for this criterion.

3. Short Term Effectiveness

a. No Action does nothing to reduce the existing risks. However, because there are no construction activities that will occur there is no potential for increased exposure to workers or the community. Therefore, the overall risks tend to balance each other out for this criterion giving an overall "0" ranking.

b. Off Site Landfill and Stabilization with Off Site Landfill these alternatives do involve construction activities so there is an increased potential for exposure to the workers. These risks include possible spillage during transportation and the increased contact with the soil the workers experience during excavation. The construction activities are expected to take only a couple of months. For these reasons the landfill alternatives rated a "-".

c. In-Situ Glassification has the advantage of no excavation, however gases are produced as the soil is melted. The gases produced will be treated and rendered non-hazardous. Therefore it was graded a "0" for short-term effectiveness.

TABLE 1

COMPARISON OF REMEDIAL ALTERNATIVES

INDUSTRIAL TRANSFORMER
SUPERFUND SITE

ALTERNATIVES	REDUCES			EFFECTIVENESS		IMPLEMENT-ABILITY	COST $ MILLION
	MOB.	TOX.	VOL.	SHORT-TERM	LONG-TERM		
1. NO ACTION	-	-	0	0	-	+	.45
2. OFF-SITE LANDFILL	0	-	0	-	-	+	2.3
3. STABILIZATION AND OFF-SITE LANDFILL	+	-	-	-	0	+	3.5
4. INSITU GLASSIFICATION	+	+	+	0	+	-	1.5
5. ON-SITE INCINERATION	+	+	+	-	+	+	2.5
6. OFF-SITE INCINERATION	+	+	+	-	+	+	6.1
7. CHEMICAL DECHLORINIZATION	+	+	+	0	+	0	2.2
8. BIOLOGICAL TREATMENT	+	+	+	0	+	0	3.3

LEGEND

+ = Alternative would exceed criterion in comparison to other alternatives

0 = Alternative can be designed to meet criterion

- = Difficult for alternative to meet criterion

ABBREVIATIONS

MOB = Mobility

TOX = Toxicity

VOL = Volume

Table 2

Summary of Applicable or Relevant
and Appropriate Environmental Statutes

Statute	Regulation	Remedial Alternatives			
		1) No Action	2) Off-Site Landfill	3) Stabilization With Off-Site Landfill	4) [1]Insitu Glassification
Toxic Substance and Control Act (TSCA)	Usage and disposal of PCBs (40 CFR 761)	NA	A	A	R
Resource Conservation and Recovery Act (RCRA)	A) Operation of hazardous waste storage/treatment facilities (40 CFR 264)	NA	A	A	R
	B) Hazardous waste land disposal ban (40 CFR 268)	NA	A	A	R
	C) Incineration Regulations (40 CFR 265)	NA	NA	NA	NA
Occupational Safety and Health Act	Protection standards for workers (29 CFR 1910)	A	A	A	A
Department of Transportation	Regulates the transport of hazardous waste (49 CFR 179)	NA	A	A	NA
Texas Solid Waste Disposal Act	Operation of hazardous waste storage	NA	A	A	R

KEY

A Applicable-requirement will be met
R Relevant and appropriate requirement will be met
NA not an ARAR

TABLE 2 (Cont'd)

Summary of Applicable or Relevant
and Appropriate Environmental Statutes

Statute	Regulation	Remedial Alternatives		
		Onsite 5) Incineration	Offsite 6) Incineration	Chemical 7) Dechloriniza
Toxic Substance and Control Act (TSCA)	Usage/Disposal	R	R	R
Resource Conservation and Recovery Act	A) Operation of hazardous waste storage/treatment facilities (40 CFR 264)	R	A	R
	B) Hazardous waste land disposal ban (40 CFR 268)	R	R	R
	C) Incineration Regulations (40 CFR 265)	A	A	NA
Occupational Safety and Health Act	Protection standards for workers (29 CFR 1910)	A	A	A
Department of Transportation	Regulates the transport of hazardous waste (49 CFR 179)	NA	A	NA
Texas Solid waste Disposal Act	Operation of hazardous waste storage	R	A	R

KEY

oplicable-requirement will be met
elevant and appropriate requirement will be met

c. Stabilization with Off Site Landfill was rated a "+" for mobility. Stabilization before landfilling will immobilize the waste before containment. The toxicity will not change so it was rated "-" and the volume will greatly increase due to the fixatives added to stabilize the waste so it was rated a "-".

d. In-Situ Glassification was rated with a "+" for mobility because this method convert the soils into a stable material resembling natural obsidian. It was rated a "+" in toxicity reduction because it would be expected to destroy PCBs in the soil with a greater than 99.9999% destruction efficiency. Glassification will reduce the volume of toxic substances substantially, therefore it is rated a "+".

e. On Site and Off Site Incineration were given a "+" for reducing toxicity, and mobility because thermal destruction destroy organics in the soil. Soil will not burn, therefore the volume of soil will not be substantially reduced, however, since the volume of contaminants will be reduced these are rated a "+" on volume reduction.

f. Chemical Dechlorinization was given a "+" for reducing mobility and toxicity because studies show that PCBs will be eliminated. After treatment the volume of remaining material is relatively unchanged because the material treated is soil. However, since the volume of contaminants will be reduced this rated a "+" on volume reduction.

g. Biological Treatment was given a "+" for reduction in mobility and toxicity because studies show that PCBs can be biodegraded. The volume of toxic substances will be reduced therefore this alternative was rated a "+" for this criterion.

3. Short Term Effectiveness

a. No Action does nothing to reduce the existing risks. However, because there are no construction activities that will occur there is no potential for increased exposure to workers or the community. Therefore, the overall risks tend to balance each other out for this criterion giving an overall "0" ranking.

b. Off Site Landfill and Stabilization with Off Site Landfill these alternatives do involve construction activities so there is an increased potential for exposure to the workers. These risks include possible spillage during transportation and the increased contact with the soil the workers experience during excavation. The construction activities are expected to take only a couple of months. For these reasons the landfill alternatives, rated a "-".

c. In-Situ Glassification has the advantage of no excavation, however gases are produced as the soil is melted. The gases produced will be treated and rendered non-hazardous. Therefore it was graded a "0" for short-term effectiveness.

d. On Site Incineration received a "-" for short-term effectiveness. As previously stated excavation poses a short-term potential health hazard to the workers. Although there will be gases produced from the incineration these gases are primarily non-hazardous and will not impose any significant increased health risks to the community. Air monitoring will be concurrent with any incineration. Time requirements should be approximately two months for the test burn treatability study and another four months for the treatment itself.

e. Off Site Incineration received a "-" for short-term effectiveness because the soil must be excavated, as well as transported, increasing exposure to the workers and the community. Due to scheduling problems with incinerators, implementation of this alternative may take several years.

f. Chemical Dechlorinization and Biological Treatment were given "0" for short term effectiveness. Although the worker will be wearing protective gear excavating the contaminants will expose the workers to the contaminants more than an insitu process will.

4. Long-term Effectiveness and Permanence

a. No Action allows for further migration of the contaminants in the environment and therefore this alternative received a "-".

b. Off Site Landfill was given "-" because a landfill may allow for the potential of migration if the liner is not maintained and is therefore, the least preferred alternative under SARA.

c. Stabilization with Off Site Landfill was given a "0" for long-term effectiveness because it offers a more permanent solution than landfilling alone but the wastes are not destroyed as in the other treatment alternatives.

d. In-Situ Glassification, Chemical Dechlorinization, Off and On Site Incineration and Biological Treatment were given a "+" because they eliminate the contaminant thereby rendering both long-term and permanent solutions. Little to no maintenance is required for these alternatives. Glassification, chemical dechlorinization and biological treatment are all innovative technologies, therefore, there is a degree of uncertainty associated with these methods not associated with off or on site incineration.

5. Implementability

a. No Action is very simple to implement therefore, it rated a "+". There are no construction activities, only setting up monitoring systems.

protect human health and the environment more than the "no action" alternative, however, all require excavation and transportation which increases the exposure of the workers and the community to the PCBs. Glassification does not require excavation or transportation and does provide protection to human health and the environment. It destroys the contaminant and therefore eliminates the threat of dermal contact and ingestion. However, because buildings are located on site it is not technically feasible. Chemical Dechlorinization, Biological Treatment and On site Incineration all require excavation for treatment. These treatments processes do meet the TSCA Spill Cleanup Policy recommendation for the protection of human health and the environment. They destroy the contaminant and thereby eliminate the threat of dermal contact and ingestion, and they are SARA preferred remedies.

Selected Remedy: Dechlorinization

Rationale

As previously stated, based on the information available to evaluate the eight remedial options against these nine criteria, EPA has concluded that Alternative 7, Chemical Dechlorinization, is the Agency's selected alternative. This alternative is protective of human health and the environment, attains all applicable or relevant and appropriate Federal and State requirements and is cost effective. This alternative satifies SARA's preference for a remedy which employs treatment as the principal element to reduce toxicity, mobility or volume.

Treatability studies will be conducted during the design phase of the project. The contaminated soils will be excavated and an alkali metal polyethylene glycolate reagent (APEG) will be applied. This reagent dechlorinates the PCBs, rendering them harmless. After treating the soil to or below a PCB concentration of 25 ppm, the liquid byproducts of this treatment may be pretreated if necessary and discharged into a public owned treatment works facility.

Operation and Maintenance (O&M)

The need for future operation and maintenance will be minimized since the contamination will be removed. Site operation and maintenance will include a shallow groundwater sampling and analysis program which will be included with the remedy for the groundwater. Additional site maintenance will entail the inspection and care of the surface vegetation.

b. Off Site Landfill, Stabilization with Off Site landfill and Off Site Incineration were given a "+" because of the minimum amount of difficulty that would be expected from simply excavating the waste and taking them off site for disposal. These alternatives are very compatible with both existing and future land uses.

c. In-Situ Glassification was given a "-" because there will be some difficulty associated with the construction of this process. It is a new technology and there will be a need for special equipment and specialists. Furthermore, this method causes the soil to contract which may cause structural problems with the existing buildings located on the site.

d. On Site Incineration was rated a "+". This technology is new. There is some difficulty associated with the construction setup and trial test burn, however this technology has proven to be reliable in the past. Ample room exists at the site to set up and operate an on site incinerator.

e. Biological Treatment and Chemical Dechlorinization were both given a "0" because they are innovative technologies. Excellent results have been obtained in field tests on both processes which are being considered and implemented on other Superfund sites. There is ample available space at the site for both of these technologies. They are compatible with current and future land uses.

6. Cost

Estimated costs for each remedial action alternative are summarized in Table 1. A breakdown of this cost may be found in Appendix A of the Feasibility Study.

7. Community Acceptance

The public comment period began January 25, 1988 and ended February 24, 1988. The public meeting was held Febuary 2. One comment was received during the public comment period objecting to the recommended alternate from a vendor of a different technology.

8. State Acceptance

The State of Texas (Texas Water Commission) has concurred with chemical dechlorinization as the treatment alternative.

9. Overall Protection of Human Health and the Environment

"No Action" does not protect human health and the environment. Off Site Landfill, Stabilization with Off Site Landfill and Off Site Incineration,

Future Actions

No future actions are anticipated for the soil. The selected remedial action will afford a high degree of permanence.

Remedial Action Schedule

Approve Remedial Action (sign ROD)	March 1988
Complete Enforcement Negotiation	Sept. 1988
Award Cooperative Agreement Amendment for Design of approved Remedy	Sept. 1988
Start Design	Oct. 1988
Complete Design	Dec. 1989
Award Remedial Action Cooperative Agreement Amendment for Construction of approved Remedy	Dec. 1989
Start Construction	June 1990
Complete Remediation	June 1991

ATTACHMENT A

ADMINISTRATIVE RECORD INDEX

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	April 16, 1984
Document Type	Correspondence
Originator	Charles E. Nemir
Originator - Affiliation	Texas Department of Water Resources
Recipient	Dick Whittington
Recipient - Affiliation	U.S. EPA - Region VI
Description	Re: Hazardous Ranking System Submittals
Number of Pages	1
Document Number Sequences	1

Document Date	November 13, 1973
Document Type	Worksheet Picture Log & Water Control System
Originator	Jerry R. Kahl
Originator - Affiliation	Texas Water Pollution Control
Recipient	Files
Recipient - Affiliation	U.S. EPA - Region VI
Description	
Number of Pages	3
Document Number Sequences	2

Document Date	June 14, 1984
Document Type	Hazardous Ranking Systems Package
Originator	U.S. EPA - Region VI
Originator - Affiliation	
Recipient	Files
Recipient - Affiliation	U.S. EPA - Region VI
Description	Document
Number of Pages	15
Document Number Sequences	3

Document Date	
Document Type	Enforcement Notice
Originator	
Originator - Affiliation	
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Enforcement Notice
Number of Pages	3
Document Number Sequences	4

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	April 12, 1982
Document Type	Interoffice Memorandum
Originator	Fred C. Dalby
Originator - Affiliation	Texas Department of Water Resources
Recipient	Gary Schroeder
Recipient - Affiliation	Texas Department of Water Resources
Description	TCE & PCB Contamination
Number of Pages	21
Document Number Sequences	13

Document Date	August 18, 1983
Document Type	Interoffice Memorandum
Originator	Fred C. Dalby
Originator - Affiliation	Texas Department of Water Resources
Recipient	Gary Schroeder
Recipient - Affiliation	Texas Department of Water Resources
Description	Enforcement Action
Number of Pages	2
Document Number Sequences	14

Document Date	April 26, 1984
Document Type	Worksheet
Originator	Steve Gilrein
Originator - Affiliation	U.S. EPA - Region VI
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Potential Hazardous Waste Site Identification
Number of Pages	1
Document Number Sequences	15

Document Date	April 12, 1984
Document Type	Worksheet
Originator	Fred C. Dalby
Originator - Affiliation	Texas Department of Water Resources
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Site Inspection Report
Number of Pages	10
Document Number Sequences	16

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	August 12, 1983
Document Type	Document
Originator	Fred C. Dalby
Originator - Affiliation	Texas Department of Water Resources
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Investigation Report
Number of Pages	4
Document Number Sequences	17

Document Date	July 5, 1982
Document Type	Interoffice Memorandum
Originator	Merton J. Coloton
Originator - Affiliation	Texas Department of Water Resources
Recipient	Gary D. Schroeder
Recipient - Affiliation	Texas Department of Water Resources
Description	Enforcement Action
Number of Pages	1
Document Number Sequences	18

Document Date	July 5, 1982
Document Type	Document
Originator	Fred C. Dalby
Originator - Affiliation	Texas Department of Water Resources
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Site Investigation Report
Number of Pages	3
Document Number Sequences	19

Document Date	March 22, 1982
Document Type	Document
Originator	
Originator - Affiliation	
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Clean-up by Owner
Number of Pages	1
Document Number Sequences	20

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	September 14, 1981
Document Type	B. McDonald-Buyton
Originator	
Originator - Affiliation	
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Health Compliants
Number of Pages	2
Document Number Sequences	21

Document Date	Worksheet
Document Type	Fred C. Dalby
Originator	Texas Department of Water Resources
Originator - Affiliation	File
Recipient	U.S. EPA - Region VI
Recipient - Affiliation	Compliant Report
Description	1
Number of Pages	22
Document Number Sequences	

Document Date	May 15, 1984
Document Type	Interoffice Memo
Originator	Gail Corrigan
Originator - Affiliation	Texas Department of Water Resources
Recipient	Bryan Dixon
Recipient - Affiliation	Texas Department of Water Resources
Description	Sol Lynn Property
Number of Pages	2
Document Number Sequences	23

Document Date	January 31, 1985
Document Type	Correspondence
Originator	Sammy Russo
Originator - Affiliation	Roy F. Weston
Recipient	Michael Warner
Recipient - Affiliation	
Description	Lab Results
Number of Pages	31
Document Number Sequences	24

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	June 27, 1985
Document Type	Memo
Originator	Kendall Young
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Charles Gazda
Recipient - Affiliation	U.S. EPA - Region VI
Description	Analytical Data
Number of Pages	15
Document Number Sequences	25

Document Date	August 27, 1984
Document Type	Record of Communication
Originator	George Buynoski
Originator - Affiliation	Center of Disease Control
Recipient	John Cochran
Recipient - Affiliation	U.S. EPA - Region VI
Description	Immediate Health Hazard From Site
Number of Pages	1
Document Number Sequences	26

Document Date	September 25, 1984
Document Type	Record of Communication
Originator	John Cochran
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Tom Goddard
Recipient - Affiliation	Texas Attorney Generals Office
Description	Sol Lynn Law Suit
Number of Pages	1
Document Number Sequences	27

Document Date	October 31, 1984
Document Type	Document
Originator	
Originator - Affiliation	
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Planning Activities and RI/FS
Number of Pages	2
Document Number Sequences	28

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	February 6, 1985
Document Type	Newspaper Article
Originator	Bill Dawson
Originator - Affiliation	The Houston Chronide
Recipient	Public
Recipient - Affiliation	
Description	Fall Study of Toxic Cleanup Planned
Number of Pages	1
Document Number Sequences	29

Document Date	February 6, 1985
Document Type	Newspaper Article
Originator	Harold Scarlett
Originator - Affiliation	The Houston Post
Recipient	Public
Recipient - Affiliation	
Description	EPA Evaluating Cleanup Steps for Waste Site
Number of Pages	1
Document Number Sequences	29

Document Date	November 13, 1973
Document Type	Worksheet
Originator	Jerry R. Kahl
Originator - Affiliation	Texas Water Pollution Control
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Comments of Visual Contaminants
Number of Pages	1
Document Number Sequences	30

Document Date	February 4, 1985
Document Type	Correspondence
Originator	Warren Zehner
Originator - Affiliation	Weston - Sper
Recipient	Gerald Fontenot
Recipient - Affiliation	U.S. EPA - Region VI
Description	Industrial Transformer Site Inspection
Number of Pages	11
Document Number Sequences	31

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	June 11, 1985
Document Type	Correspondence
Originator	Susan K. Siegel
Originator - Affiliation	Weston Sper
Recipient	Gerald Fontenot
Recipient - Affiliation	U.S. EPA - Region VI
Description	Well Sampling
Number of Pages	1
Document Number Sequences	32

Document Date	October 2, 1985
Document Type	Inteoffice Memorandum
Originator	Karen Solari
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Gerald Fontenot
Recipient - Affiliation	U.S. EPA - Region VI
Description	Review of Data
Number of Pages	2
Document Number Sequences	33

Document Date	December 1985
Document Type	Report
Originator	U.S. EPA - Region VI
Originator - Affiliation	
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Community Relatins Plan
Number of Pages	22
Document Number Sequences	34

Document Date	February 11, 1985
Document Type	Correspondence
Originator	Rosemary Henderson
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Charles Gazde
Recipient - Affiliation	U.S. EPA - Region VI
Description	Trip Report
Number of Pages	3
Document Number Sequences	35

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	November 10, 1985
Document Type	Newspaper Article
Originator	Harold Scarlett
Originator - Affiliation	The Houston Post
Recipient	Public
Recipient - Affiliation	
Description	Waste Site Owner Objects to Cleanup
Number of Pages	1
Document Number Sequences	36

Document Date	October 28, 1985
Document Type	Correspondence
Originator	Charles R. Fauld
Originator - Affiliation	Texas Water Commission
Recipient	Bonnie DeVos
Recipient - Affiliation	U.S. EPA - Region VI
Description	Justification for RI/FS
Number of Pages	2
Document Number Sequences	37

Document Date	March 7, 1983
Document Type	Correspondence
Originator	Charles Nemir
Originator - Affiliation	Texas Department of Water Resources
Recipient	Jim Mattox
Recipient - Affiliation	Attorney General of Texas
Description	Legal Action Against Sol Lynn
Number of Pages	2
Document Number Sequences	38

Document Date	June 11, 1982
Document Type	Interoffice Correspondence
Originator	Lew Turnock
Originator - Affiliation	City of Houston
Recipient	John R. Whittington
Recipient - Affiliation	City of Houston
Description	TCE Hea th Hazard
Number of Pages	1
Document Number Sequences	39

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	March 4, 1985
Document Type	Record of Communication
Originator	Drew Puffer
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Tom Goddard
Recipient - Affiliation	Texas Attorney General's Office
Description	Civil Penalty Trial in July
Number of Pages	1
Document Number Sequences	40

Document Date	August 27, 1984
Document Type	Record of Communication
Originator	John Cochran
Originator - Affiliation	U.S. EPA - Region VI
Recipient	George Buynoski
Recipient - Affiliation	Center for Disease Control
Description	Health Hazard at Site
Number of Pages	1
Document Number Sequences	41

Document Date	April 24, 1985
Document Type	Memorandum
Originator	Samuel L. Nott
Originator - Affiliation	U.S. EPA - Region VI
Recipient	William Hathaway
Recipient - Affiliation	U.S. EPA - Region VI
Description	Industrial Transformers
Number of Pages	3
Document Number Sequences	42

Document Date	January 15, 1987
Document Type	Correspondence
Originator	John Bins
Originator - Affiliation	ERT Company
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Sampling
Number of Pages	10
Document Number Sequences	43

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	June 27, 1985
Document Type	Document
Originator	
Originator - Affiliation	
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Final Report Laboratory Report
Number of Pages	41
Document Number Sequences	44

Document Date	March 17, 1986
Document Type	Document
Originator	TWC
Originator - Affiliation	
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Work Scope for RI/FS Studies
Number of Pages	20
Document Number Sequences	45

Document Date	October 13, 1986
Document Type	Report
Originator	Radian Corporation
Originator - Affiliation	
Recipient	Texas Water Commission
Recipient - Affiliation	
Description	Project Sampling Plan
Number of Pages	71
Document Number Sequences	46

Document Date	October 13, 1986
Document Type	Report
Originator	Radian Corporation
Originator - Affiliation	
Recipient	Texas Water Commission
Recipient - Affiliation	
Description	Project Health & Safety P
Number of Pages	34
Document Number Sequences	47

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	June 30, 1986
Document Type	Document
Originator	Texas Water Commission
Originator - Affiliation	
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Contract with Radian
Number of Pages	78
Document Number Sequences	48

Document Date	December 22, 1986
Document Type	Correspondence
Originator	Arthur Talley
Originator - Affiliation	TWC
Recipient	Sol Lynn
Recipient - Affiliation	
Description	Remedial Investigation
Number of Pages	14
Document Number Sequences	49

Document Date	January 15, 1987
Document Type	
Originator	John Bins
Originator - Affiliation	ERT
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Industrial Transformers
Number of Pages	3
Document Number Sequences	50

Document Date	January 16, 1987
Document Type	Record of Communication
Originator	Robie Hirt
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Industrial Transformer Progress
Number of Pages	1
Document Number Sequences	51

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	Janauary 29, 1987
Document Type	Memorandum
Originator	Steve Muse
Originator - Affiliation	U.S. EPA - Region VI
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Report on Field Audit of RI
Number of Pages	1
Document Number Sequences	52

Document Date	June 17, 1987
Document Type	Correspondence
Originator	Sharron Oppel
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	RI/FS Information
Number of Pages	1
Document Number Sequences	53

Document Date	July 15, 1987
Document Type	Correspondence
Originator	Arthur Talley
Originator - Affiliation	Texas Water Commission
Recipient	Sol Lynn
Recipient - Affiliation	
Description	Remedial Investigation
Number of Pages	1
Document Number Sequences	54

Document Date	July 28, 1987
Document Type	Memorandum
Originator	Sherry Fuerst
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Carl Hickam
Recipient - Affiliation	Agency for Toxic Substance Control & Disease Registry
Description	
Number of Pages	1
Document Number Sequences	55

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	July 29, 1987
Document Type	Correspondence
Originator	Sherry Fuerst
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Comments on Draft RI
Number of Pages	3
Document Number Sequences	56

Document Date	August 26, 1987
Document Type	Interoffice Memorandum
Originator	John DuPont
Originator - Affiliation	Texas Water Commission
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Review of Data Package for Sol Lynn
Number of Pages	3
Document Number Sequences	57

Document Date	September 8, 1987
Document Type	Correspondence
Originator	Donald H. Williams
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	TCE Cleanup Criteria
Number of Pages	1
Document Number Sequences	58

Document Date	September 1987
Document Type	Correspondence
Originator	Sherry Fuerst
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Phase II RI Scope of Services
Number of Pages	2
Document Number Sequences	59

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	September 10, 1987
Document Type	Memorandum
Originator	Don Williams
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Carl Hickam
Recipient - Affiliation	Agency for Toxic Substance & Disease Registry
Description	
Number of Pages	2
Document Number Sequences	60

Document Date	September 11, 1987
Document Type	Correspondence
Originator	Sherry Fuerst
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Comments on Preliminary Technologies
Number of Pages	1
Document Number Sequences	61

Document Date	September 17, 1987
Document Type	Correspondence
Originator	Thomas W. Hoskins
Originator - Affiliation	Radian Corporation
Recipient	Sherry Fuerst
Recipient - Affiliation	U.S. EPA - Region VI
Description	TCE Action Level
Number of Pages	4
Document Number Sequences	62

Document Date	September 24, 1987
Document Type	Memorandum
Originator	Sharon Fuerst
Originator - Affiliation	U.S. EPA - Region VI
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Action Level for TCE
Number of Pages	3
Document Number Sequences	63

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	September 30, 1987
Document Type	Correspondence
Originator	Sherry Fuerst
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Compliant Disposal Facilities
Number of Pages	1
Document Number Sequences	64

Document Date	October 7, 1987
Document Type	Memorandum
Originator	Sharon Fuerst
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Carl Hickam
Recipient - Affiliation	Agency for Toxic Substance & Disease Control
Description	TCE Contamination
Number of Pages	3
Document Number Sequences	65

Document Date	October 10, 1987
Document Type	Correspondence
Originator	Sharon Fuerst
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Mary McGill
Recipient - Affiliation	Radian Corporation
Description	Decontamination Water
Number of Pages	1
Document Number Sequences	66

Document Date	October 12, 1987
Document Type	Correspondence
Originator	Arthur Talley
Originator - Affiliation	Texas Water Commission
Recipient	Riaz Anmend
Recipient - Affiliation	Radian Corporation
Description	Draft Feasibility Comments
Number of Pages	13
Document Number Sequences	67

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	October 13, 1987
Document Type	Correspondence
Originator	Sharon Fuerst
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Review of Preliminary Technologies
Number of Pages	2
Document Number Sequences	68

Document Date	November 5, 1987
Document Type	Memorandum
Originator	George Pettigrew
Originator - Affiliation	Agency for Toxic Substance & Disease Control
Recipient	Sharon Fuerst
Recipient - Affiliation	U.S. EPA - Region VI
Description	Health Consultation
Number of Pages	3
Document Number Sequences	69

Document Date	November 6, 1987
Document Type	Correspondence
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	Robin Gelston-Walls
Recipient - Affiliation	U.S. EPA - Region VI
Description	Identifying Federal ARARs
Number of Pages	1
Document Number Sequences	70

Document Date	November 9, 1987
Document Type	Correspondence
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	Pauline Krueger Trust ; Moody National Bank
Recipient - Affiliation	
Description	Access Agreement
Number of Pages	2
Document Number Sequences	71

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Job Name: Industrial Transformer
Job Number: T327

Document Date	November 19, 1987
Document Type	Correspondence
Originator	Sherry Fuerst
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Comments on RI Report
Number of Pages	2
Document Number Sequences	76

Document Date	November 19, 1987
Document Type	Correspondence
Originator	Stanley G. Hitt
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Greg Tipple
Recipient - Affiliation	Texas Water Commission
Description	Cleanup Levels for TCE
Number of Pages	1
Document Number Sequences	77

Document Date	December 16, 1987
Document Type	Correspondence
Originator	Sherry Fuerst
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Comments on Draft FS
Number of Pages	9
Document Number Sequences	78

Document Date	December 23, 1987
Document Type	Memorandum
Originator	Sherry Fuerst
Originator - Affiliation	U.S. EPA - Region VI
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Alternative Selection
Number of Pages	2
Document Number Sequences	79

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	November 9, 1987
Document Type	Correspondence
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	Lavanne P. McLaughlin
Recipient - Affiliation	
Description	Access Agreement
Number of Pages	2
Document Number Sequences	72

Document Date	November 9, 1987
Document Type	Correspondence
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	Maury Ruberstein
Recipient - Affiliation	
Description	Access Agreement
Number of Pages	2
Document Number Sequences	73

Document Date	November 9, 1987
Document Type	Correspondence
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	Lawrence Kagen
Recipient - Affiliation	Kagen-Edelman Enterprizes
Description	Access Agreement
Number of Pages	2
Document Number Sequences	74

Document Date	November 10, 1987
Document Type	Correspondence
Originator	Sherry Fuerst
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Comments on Draft RI Report
Number of Pages	7
Document Number Sequences	75

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Job Name: Industrial Transformer
Job Number: T327

Document Date	December 23, 1987
Document Type	Correspondence
Originator	Sherry Fuerst
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Phase II Draft Project Plan Comments
Number of Pages	1
Document Number Sequences	80

Document Date	February 29, 1984
Document Type	Interoffice Memo
Originator	Mike Dick
Originator - Affiliation	Texas Department of Water Resources
Recipient	Rod Kimbro
Recipient - Affiliation	Texas Department of Water Resources
Description	Contamination at Site
Number of Pages	2
Document Number Sequences	81

Document Date	November 29, 1985
Document Type	Correspondence
Originator	Carlene Chambers
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Charles Faulds
Recipient - Affiliation	Texas Water Commission
Description	Schedules
Number of Pages	1
Document Number Sequences	82

Document Date	September 5, 1985
Document Type	Record of Communication
Originator	Steve Muse
Originator - Affiliation	U.S. EPA - Region VI
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Workplan Schedule
Number of Pages	
Document Number Sequences	83

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	May 23, 1985
Document Type	Worksheet
Originator	S&B labs
Originator - Affiliation	
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Water Analysis Results
Number of Pages	1
Document Number Sequences	84

Document Date	April 2, 1985
Document Type	Correspondence
Originator	Linda Graham
Originator - Affiliation	Chromaspec
Recipient	Sol Lynn
Recipient - Affiliation	
Description	Lab Results
Number of Pages	3
Document Number Sequences	85

Document Date	March 17, 1986
Document Type	Document
Originator	
Originator - Affiliation	
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Texas Water Commission Request for Proposals
Number of Pages	13
Document Number Sequences	86

Document Date	May 5, 1986
Document Type	Interoffice Memorandum
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	Larry Soward
Recipient - Affiliation	Texas Water Commission
Description	Executive Summary Review
Number of Pages	2
Document Number Sequences	87

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	April 10, 1986
Document Type	Correspondence
Originator	Nancy E. Olinger
Originator - Affiliation	Texas Attorney General's Office
Recipient	Barry Berger
Recipient - Affiliation	Newton B. Schwartz
Description	State of Texas V. Sol Lynn
Number of Pages	1
Document Number Sequences	88

Document Date	April 8, 1988
Document Type	Interoffice Memo
Originator	Arthur Talley
Originator - Affiliation	Texas Water Commission
Recipient	Greg Tipple
Recipient - Affiliation	Texas Water Commission
Description	Consultant's Site Visit
Number of Pages	1
Document Number Sequences	89

Document Date	March 31, 1986
Document Type	Correspondence
Originator	Barry S. Berger
Originator - Affiliation	Newton B. Schwartz
Recipient	David H. Sorrells
Recipient - Affiliation	Texas Water Commission
Description	State of Texas vs. Sol Lynn
Number of Pages	2
Document Number Sequences	90

Document Date	March 18, 1986
Document Type	Correspondence
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	Sol Lynn
Recipient - Affiliation	
Description	Site Visit
Number of Pages	2
Document Number Sequences	91

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Job Name: Industrial Transformer
Job Number: 7327

Document Date	March 11, 1986
Document Type	Correspondence
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	Sol Lynn
Recipient - Affiliation	
Description	Site Visit
Number of Pages	2
Document Number Sequences	92

Document Date	July 21, 1986
Document Type	Correspondence
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	H.E. Finger
Recipient - Affiliation	
Description	Access Agreement
Number of Pages	4
Document Number Sequences	93

Document Date	July 21, 1986
Document Type	Correspondence
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	Kagen Edelman Enterprises
Recipient - Affiliation	
Description	Access Agreement
Number of Pages	4
Document Number Sequences	94

Document Date	July 21, 1986
Document Type	Correspondence
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	LMNCO
Recipient - Affiliation	
Description	Access Agreement
Number of Pages	4
Document Number Sequences	95

ADMINISTRATIVE RECORD INDEX

Job Name: Industria' Transformer
Job Number: T327

Document Date	July 21, 1986
Document Type	Correspondence
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	PDC Partnership
Recipient - Affiliation	
Description	Access Agreement
Number of Pages	4
Document Number Sequences	96

Document Date	July 21, 1986
Document Type	Correspondence
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	Darlena Jones
Recipient - Affiliation	Gilbralter Savings Association
Description	Access Agreement
Number of Pages	4
Document Number Sequences	97

Document Date	July 22, 1986
Document Type	Correspondence
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	Barry S. Berger
Recipient - Affiliation	
Description	Access Agreement
Number of Pages	6
Document Number Sequences	98

Document Date	
Document Type	Document
Originator	Radian Corporation
Originator - Affiliation	
Recipient	Files
Recipient - Affiliation	U.S. EPA - Region VI
Description	Scope of Work
Number of Pages	29
Document Number Sequences	99

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	August 4, 1986
Document Type	Correspondence
Originator	Arthur Talley
Originator - Affiliation	Texas Water Commission
Recipient	Paul Sieminski
Recipient - Affiliation	U.S. EPA - Region VI
Description	Cooperative Agreement Schedules
Number of Pages	
Document Number Sequences	100

Document Date	August 15, 1986
Document Type	Correspondence
Originator	David Sorrells
Originator - Affiliation	Texas Water Commission
Recipient	Darlene Jones
Recipient - Affiliation	Gilbralter Savings Association
Description	Access Agreement
Number of Pages	4
Document Number Sequences	101

Document Date	August 27, 1986
Document Type	Correspondence
Originator	Paul Sieminski
Originator - Affiliation	U.S. EPA - Region VI
Recipient	David Sorrells
Recipient - Affiliation	Texas Water Commission
Description	Comments on Health & Safety Plan
Number of Pages	2
Document Number Sequences	102

Document Date	August 29, 1986
Document Type	Correspondence
Originator	James F. Haley
Originator - Affiliation	Texas Water Commission
Recipient	Sol Lynn
Recipient - Affiliation	
Description	Access Agreement
Number of Pages	1
Document Number Sequences	103

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	September 3, 1986
Document Type	Record of Communication
Originator	Robie Hirt
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Bonnie Devos
Recipient - Affiliation	U.S. EPA - Region VI
Description	Site Schedule Update
Number of Pages	1
Document Number Sequences	104

Document Date	September 8, 1986
Document Type	Interoffice Memorandum
Originator	Arthur Talley
Originator - Affiliation	Texas Water Commission
Recipient	David Sorrells
Recipient - Affiliation	Texas Water Commission
Description	Status Report
Number of Pages	1
Document Number Sequences	105

Document Date	October 6, 1986
Document Type	Interoffice Memorandum
Originator	Arthur Talley
Originator - Affiliation	Texas Water Commission
Recipient	David Sorrells
Recipient - Affiliation	Texas Water Commission
Description	Status Report
Number of Pages	1
Document Number Sequences	106

Document Date	November 3, 1986
Document Type	Interoffice Memorandum
Originator	Arthur Talley
Originator - Affiliation	Texas Water Commission
Recipient	David Sorrells
Recipient - Affiliation	Texas Water Commission
Description	Status Report
Number of Pages	1
Document Number Sequences	107

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	December 1, 1986
Document Type	Interoffice Memorandum
Originator	Arthur Talley
Originator - Affiliation	Texas Water Commission
Recipient	David Sorrells
Recipient - Affiliation	Texas Water Commission
Description	Status Report
Number of Pages	1
Document Number Sequences	108

Document Date	September 29, 1986
Document Type	Record of Communication
Originator	Cindy Aduddell
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Access Agreements
Number of Pages	1
Document Number Sequences	109

Document Date	October 3, 1986
Document Type	Record of Communication
Originator	Cindy Aduddell
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	Schedule Revisions
Number of Pages	1
Document Number Sequences	110

Document Date	October 6, 1986
Document Type	Correspondence
Originator	Arthur Talley
Originator - Affiliation	Texas Water Commission
Recipient	Calvin Spencer
Recipient - Affiliation	Radian Corporation
Description	Comments on Draft Project Plan
Number of Pages	18
Document Number Sequences	111

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: 7327

Document Date	September 22, 1986
Document Type	Correspondence
Originator	Paul Sieminski
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Greg Tipple
Recipient - Affiliation	Texas Water Commission
Description	QA Comments
Number of Pages	2
Document Number Sequences	112

Document Date	August 27, 1986
Document Type	Correspondence
Originator	Paul Sieminski
Originator - Affiliation	U.S. EPA - Region VI
Recipient	David Sorrells
Recipient - Affiliation	Texas Water Commission
Description	Comments on Health & Safety Plan
Number of Pages	2
Document Number Sequences	113

Document Date	September 3, 1986
Document Type	Interoffice Memorandum
Originator	Ernest W. Heyer
Originator - Affiliation	Texas Water Commission
Recipient	Arthur Talley
Recipient - Affiliation	Texas Water Commission
Description	QA Plan Comments
Number of Pages	2
Document Number Sequences	114

Document Date	November 11, 1986
Document Type	Record of Communication
Originator	Robie Hirt
Originator - Affiliation	U.S. EPA - Region VI
Recipient	Bonnie DeVos
Recipient - Affiliation	U.S. EPA - Region VI
Description	Schedule
Number of Pages	1
Document Number Sequences	115

ADMINISTRATIVE RECORD INDEX

Job Name: Industrial Transformer
Job Number: T327

Document Date	December 11, 1986
Document Type	Memorandum
Originator	Steve Muse
Originator - Affiliation	U.S. EPA - Region VI
Recipient	File
Recipient - Affiliation	U.S. EPA - Region VI
Description	Trip Report
Number of Pages	1
Document Number Sequences	116

Document Date
Document Type
Originator
Originator - Affiliation
Recipient
Recipient - Affiliation
Description
Number of Pages
Document Number Sequences

Document Date
Document Type
Originator
Originator - Affiliation
Recipient
Recipient - Affiliation
Description
Number of Pages
Document Number Sequences

Document Date
Document Type
Originator
Originator - Affiliation
Recipient
Recipient - Affiliation
Description
Number of Pages
Document Number Sequences

Sol Lynn
Houston, Texas
Responsiveness Summary

This community relations responsiveness summary is divided into two sections:

Section I: Background on Community Involvement and Concern
This section provides a brief history of community interest and concerns raised during the remedial planning activities at the Sol Lynn Superfund site.

Section II: Summary of Public Comments Received During the Public Comment Period and the EPA Responses to Comments
Both the written and spoken comments are categorized by topics. EPA responses to these relevant major topics are also presented.

I. Background on Community Involvement

Initiation of studies on Industrial Transformer was announced by TWC at a public meeting in Houston on September 24, 1986. Evaluation of the site was divided into two separate studies: 1) surface soil contamination; 2) groundwater contamination. The study addressing surface soil contamination was completed in December 1987. On January 21, 1988, a news release that a public meeting would be held on February 2, 1988, to discuss the proposed remedy for surface contamination at the site was issued. The groundwater study is expected to be completed in 1989.

An EPA prepared fact sheet which described alternative remedial actions for the soil contamination along with the EPA preferred alternative was sent to the interested and affected public shortly after the public meeting was announced. EPA and TWC conducted the 7:00 pm public meeting at the Astro Village Hotel on February 2, 1988. Approximately 35 people attended the public meeting.

II. Summary of Public Comment Received During Public Comment Period and Agency Responses

This section gives the EPA's responses to the comments during the public comment period. There was only one verbal statement made at the public meeting which was a letter from Ira E. Tobolowski and read by Mr. Sol Lynn. This letter was received by EPA and is addressed along with all the other written comments received during the public comment period in the following summary.

A. Comments from Ira E. Tobolowski on behalf of Mr. Sol Lynn, a responsible party

Comment #1

The results of EPA done by the EPA, TWC and Mr. Sol Lynn indicate there is no contamination hazardous to human health and the environment at the site. This is supported by Exhibits B, D, E, F, J, K, L, M, and N which were attached to the letter.

Response

The EPA disagrees. Exhibits B, D, and E (soil and water sample results dated May 15, 1985 and January 31, 1985) show low level PCB contamination. These sampling points are outside the contaminated zone. The data concerning TCE in the groundwater is not applicable to this particular study but will be considered in the Phase II results.

Exhibits F and G (sample results dated March 6, 1985 and April 12, 1985) also show PCB contamination above the established 25 ppm cleanup level. These tests were not funded by the TWC or the EPA and no data quality documentation was presented with the results. Therefore, this data is unacceptable.

Exhibits K, L, and M are results of water samples which containing TCE. These results pertain again to the Phase II study in which the groundwater will be considered.

Exhibit J is a memo dated April 17, 1985, stating low levels of PCB and TCE exist at the site. This memo refers to a map and historical summary of soil and water sampling at the site which was not attached to the memo, therefore, no comments can be made about level or or the location of the contamination referred to in this memo.

Comment #2

The data obtained by Radian Corporation for the Texas Water Commission is not accurate. There are serious quality assurance, quality control problems as supported by Exhibits S and T.

Response

The EPA disagrees. Exhibits S and T are memos from ERT dated March 4, 1987, and April 20, 1987, discussing the installation of monitoring wells at the site. This again relates to the Phase II study. However, it can be stated that all field laboratory data analyses were performed according to standard EPA protocol. These procedures were outlined in a site specific quality assurance/quality control plan. There were no significant deviations from this plan, such as to cause serious problems or questions with any of the data collected for the remedial investigation.

Comment #3

Mr. Sol Lynn has been harassed by the Texas Water Commission, the Texas Attorney General and the Environmental Protection Agency.

Response

EPA disagrees. In dealing with Mr. Lynn who is a potentially responsible party under CERCLA, the EPA simply carried out those procedures outlined in the National Contingency Plan for the identification, notification and participation of responsible parties in the remediation of Superfund sites.

Comment #4

Exhibit R indicates that the EPA has wasted the tax payers money on this site.

Response

Exhibit R is a copy of the Project Sampling Plan for the Remedial Investigation and Feasibility Study at Industrial Transformer site prepared by Radian Corporation for the Texas Water Commission dated October 13, 1986. This report does not document EPA cost expenditures. Funds expended at the site are justified because of the threat to human health and environment.

Comment #5

Exhibit C and O are secret memos indicating the EPA considered dropping the site from Superfund.

Response

The EPA disagrees. These are not secret memos but rather records of telephone conversations. The EPA has never considered dropping the site from the National Priority List. Exhibit C dated September 25, 1985, is a memo stating the Texas Attorney General did not want to file against Mr. Lynn for the clean up of the site. Exhibit O is the record of a phone conversation in which an employee of the Texas Department of Water Resources inquired if the EPA planned to remove the Sol Lynn site from the National Priorities List.

B. Comments from Detox Industries, a bioremediation vendor.

Comment #1

A review of the detailed cost breakdown for the recommended alternative indicates an error in addition.

Response

EPA agrees. There was an error in the addition of the direct activity costs for the dechlorinization alternative. The total present worth should be $2,178,562 not $1,773,660 as indicated in the Feasibility Study. This alternative, as corrected, is still

$ 10,000 less expensive than the other technically feasible treatment alternatives that provide an equivalent level of protection for human health and the environment. Therefore, it remains the most cost-effective remedy for the Industrial Transformer site.

Comment #2

In-situ biological treatment was improperly eliminated in Chapter 3 of the Feasibility Study.

Response

The in-site treatment of contaminated soils using microbes was screened out because it would take significantly longer than the other technologies considered. This inordinate length of time for cleanup would interfere with possible remedial action to be taken for the groundwater as well as further disrupt businesses operating at the site.

Comment #3

In-situ biodegradation is less expensive and takes only six months.

Response

Data collected at another Superfund site indicates that PCBs adsorbed to soils cannot be biodegraded to 25 ppm in six months and in fact it will take much longer. Therefore, it was screened out as being technically infeasible in comparison with the other alternatives considered, costs not a factor

2. Comments from Gulf States Utilities a potentially responsible party

Comment #1

The quality assurance project program for PCB analysis did not meet work plan objectives; consequently, all soil PCB data is in question. A review of the data indicates the Quality Assurance objective of <50% relative percent difference was consistently exceeded. Therefore, the PCB soil data is invalidated and should not be included in the Site Investigation Report or used as a basis for selecting a remedial alternative or determining potential public health impacts.

Response

The EPA disagrees that the PCB data is invalidated because of consistently exceeding the <50% relative percent difference on co-located samples. In those two instances where co-located samples

were taken in the remedial investigation, the relative difference was 18.5 and 85.7 percent, respectively. With respect to the first set of co-located samples an error was made in the Site Investigation Report text. The actual samples that were duplicated were numbers 22 and 23 not 23 and 24 as indicated. A comparison of samples 22 and 23 give 18.5 percent relative difference. In the other instance where the relative difference was 85.7 percent, both of samples had extremely low concentrations of PCBs where it is not unusual to find significant differences.

Comment #2

The RI fails to state whether the "uppermost water-bearing zone" is in an unconfined hydraulic state (water table condition) or a confined hydraulic state (artesian pressure). Knowing this is fundamental to assessing the potential for surface and near surface contaminants to move downward to the "uppermost water-bearing zone." The very generalized lithologic information in the RI implies that at least 20 feet of clay overlies the "uppermost water-bearing zone"; other data and narrative statements imply that the static water level of this zone ranges from about 3 to 5 feet below ground surface. If this is true, it would appear that the "uppermost water-bearing zone" is in a confined to semiconfined hydraulic state. Therefore, the potential for downward migration of surface contaminants would be orders of magnitude lower than if the zone is in an unconfined hydraulic state.

Response

We acknowledged that the hydrogeology of the site was not completely defined in the remedial investigation, however, it was not the intent of this study. Our main objective for the first study was to identify the extent of PCB soil contamination on site. The groundwater and deep soil TCE issue at the site will be covered in Phase II where a more complete geohydrological study will be done.

Comment #3

The soil PCB contamination objective of 25 ppm was obtained from the Toxic Substances Control Act (TSCA) PCB spill cleanup policy rule (FR, 2 APR 87), not from a site-specific risk assessment. It is unclear as to the applicability of this TSCA policy as an Appropriate, Relevant, and Applicable Regulation (ARAR).

Response

The Toxic Substances Control Act cleanup level of 25 ppm was considered relevent because it assumes an industrial setting with possible worker exposure for eight hours per day for a 40 year period. The Industrial Transformer site is likewise in an industrial setting with active businesses on site. Therefore, situations were similar enough to apply the TSCA cleanup standard.

Comment #4

A decontamination objective of 100 ppm in the soil was selected as the appropriate concentration at the Geneva Industries, Superfund site in Houston as per the Record of Decision (ROD) of 9/18/86. There was no discussion or consideration of this decision as a part of this RI/FS. A decontamination objective of 100 ppm at the Industrial Transformer site would have major implications as to the remedy selection and cost.

Response

The difference in cleanup levels is the result of the conditions which exist at the two sites. The Geneva Industries site is an abandoned facility. In addition to the higher cleanup criterion of 100 ppm, a RCRA compliant cap was placed over the entire surface of the site. This cap, which must be maintained by the State, will limit incidental exposure to the PCB contaminated soil. A cap of this type was nor feasible at the Industrial Transformers site because of the businesses currently operation at the site. As was discussed in EPA's response to comment #3, a 25 ppm cleanup level is needed to protect the health of the workers at the site without closing the businesses.

Comment #5

A remedy consisting of partial soil removal (1 foot) and hot spot removal and treatment to soil concentrations of less than 25 ppm was not considered. This would drastically reduce the volume of soil to be remediated, and consequently be a more cost-effective solution.

Response

The complexity and expense associated with excavating a hot spot, testing, excavating, then retesting makes hot spot removal technically impractical.

TEXAS WATER COMMISSION

Paul Hopkins, Chairman
John O. Houchins, Commissioner
B. J. Wynne III, Commissioner

J. D. Head, General Counsel
Michael E. Field, Chief Examiner
Karen A. Phillips, Chief Clerk

Allen Beinke, Executive Director

March 18, 1988

Dr. Allyn M. Davis
Director, Hazardous Waste Management Division
U.S. Environmental Protection Agency
Region VI (6H)
1445 Ross Avenue
Dallas, TX 75202

Re: Industrial Transformers Superfund Site
Draft Record of Decision

Dear Dr. Davis:

We have reviewed the proposed Record of Decision (ROD) for the contaminated soils (Operable Unit I) at the Industrial Transformers Superfund Site. We have no objection to the selected remedy as described in the draft ROD. The selected remedy for the site includes treatment of soils contaminated with polychlorinated biphenyls (PCBs) above the cleanup criterion using chemical dechlorinization.

Sincerely,

Allen Beinke

Allen P. Beinke
Executive Director

GT/mem